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PAINT APPLICATORS AND KITS

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This invention, in general, relates to applicators for paint and other fluids, which applicators have a removable, disposable applicator member. More specifically, the applicators of the invention are brush-type applicators wherein the applicator member is an inexpensive, cellular member such as from polyurethane.

There is need for a new type of paint applicator which has the same ease of handling as a paint brush but which is not so costly and does not require the time and effort to maintain. So unpleasant and sometimes unsafe is cleaning of paint brushes that one-use "throw-away brushes" have been readily accepted on the market. These "throw-away brushes" are very inferior to the better brushes, and consequently, they do not enable a painter to do good work while still being far from cheap. A "throw-away brush" is therefore not much of a value, and the only justification for their existence is the need created by the consumer's disinclination to have anything more to do with a brush after a painting job has been completed.

Polyurethane foam has every basic material characteristic to recommend it as a paint applicator as it is strong, it is porous, it will pick up and retain a liquid, it is inexpensive, it is immune to the chemicals in the various types of paint, and it can be cut to any size or thickness required. Added to this is the important fact that the porosity, rigidity, and cellular structure of polyurethane foam can be varied through different formulations to provide the best results with the varied basic types of paints and finishes on the market (cold water paints, oil based paints, varnishes, enamels, and exterior paints). In bristle brushes, very little consideration has been given to the varying viscosity and other differences which are readily apparent when each of these paints are studied individually. A polyurethane applicator can be very easily formulated to take advantage of the difference in these paints.

With polyurethane foam as the paint applicator, there is no necessity to have separate brushes of varying size and shape, as is necessary with conventional bristle brushes, as this can be controlled by the operator, as will be explained later. A special type of polyurethane foam with the most compatible characteristics of porosity and flexibility can easily be selected from foam polyurethanes that are on the market for use with paints of varying chemical composition.

Having the right type polyurethane foam applicator for the right job would be simply a matter of having available two or three different types of polyurethane foam applicators, e.g., a first type of polyurethane foam applicator for applications to interior and exterior surfaces such as wood, metal and masonry with primer, sealer, casein, latex base, and alkyl oil base paints; a second type of polyurethane foam applicator for applications to interior and exterior walls, trim, sash, etc., with an oil base paint; and a third type of polyurethane foam applicator for applications to interior and exterior walls, trim, sash, etc., with a varnish or enamel.

The polyurethane foam can be shaped to varying thicknesses and lengths. Instead of being cut into one, two, three, or four inch widths, it preferably is sold to the customer in wider sheets, e.g., twelve or twenty four inches wide. This enables the user to cut the sheet to the exact width brush desired for a particular job as the same handle of the preferred applicators of the invention can hold various thickneses and widths. Since the polyurethane foam can be cut easily by standard scissors, the user can

start out with a four inch polyurethane applicator to paint the walls, and by cutting the brush after the walls have been completed, the remaining part can be reduced in size sufficiently to allow it to be used to draw sash. This flexibility in changing the size of the same applicator while in use for different applications is a definite advantage.

The sheets of foam polyurethane may be of different contours, e.g., tapers, from top to bottom, and the bottom edges may have inward cuts made either at the factory or by the operator for ease of application over a rough surface. The bottom edge also may be cut in the other direction (longitudinally), or a similar sheet could be manufactured by laminating together at the top several layers of thin polyurethane foam sheets, e.g., 1/16 inch or 1/8 inch sheets.

In painting tests conducted with polyurethane applicators of the invention, a most significant feature is that the applicator completely eliminates brush marks as well as the overlaps which can appear when a paint roller is used.

The handle for the polyurethane applicators of the invention detachably holds the applicator. In a preferred embodiment, the handle is split, hollow handle and ferrule adapted to open and close about the base or top portion of the applicator. The ferrule portion contains means to grip tightly said base when the ferrule is closed thereabout. Preferred means for this purpose are a plurality of slanting, rearwardly directed points on the inner side of the hollow ferrule to pentrate the applicator base portion and keep the applicator base locked in the ferrule when it is closed about said base portion. A separate drip collector member having an endless inner wall dimensioned to fit tightly over the outer wall of the ferrule in closed position of the ferrule and handle may be used to lock the latter in closed position.

The features and advantages of the generic invention herein described will be appreciated further with reference to the preferred embodiments of the invention illustrated in the drawings, wherein:

FIG. 1 is a perspective view of an applicator of the invention;

FIGS. 2 and 3 are sections taken on section planes 2—2 and 3—3 of FIG. 1;

FIGS. 4 and 5 are, respectively, a longitudinal section of the handle and ferrule component and a side elevation of the foam polyurethane applicator of the embodiment of FIG. 1;

FIGS. 6, 8 and 9, respectively, are enlarged, top plan, side elevation and front elevation views of one of the multi-prong members in the ferrule of the embodiment, while FIG. 7 is a further enlarged view of a fragment thereof in side elevation;

FIG. 10 is a perspective view of a package of the character in which the handle, drip cup, and several foam polyurethane applicators may be assembled for marketing the applicators of the invention; and

FIGS. 11 and 12 are, respectively, a side elevation and a perspective view of two other embodiments of the foam polyurethane applicators of the invention.

Referring to the drawings, the illustrated applicator comprises a tapered block 1 of foam polyurethane having side walls 2, 3 tapered from the base 4 to the flexible, narrow, wiper or spreader edge 5. The edge 5 may be a sharp edge or may be a narrow, slightly blunt edge (as shown).

The handle and ferrule part of the applicator is one in which at least the ferrule portion of the member can be opened and closed to remove and insert foam polyurethane applicators. In the embodiment illustrated, the handle and ferrule are molded in a single molding operation as separable, opposing half sections 7, 8. The hollow handle is composed by opposing, symmetric, transversely